

Dividing Fractions

R 5-6

Dividing by a fraction is the same as multiplying by its reciprocal.
The product of a number and its reciprocal is 1. For example:

<u>Number</u>	\times	<u>Reciprocal</u>	$=$	<u>Product</u>
3	\times	$\frac{1}{3}$	$=$	1
$\frac{1}{8}$	\times	$\frac{8}{1}$	$=$	1
$\frac{2}{3}$	\times	$\frac{3}{2}$	$=$	1

Find $\frac{4}{5} \div \frac{3}{10}$.

Step 1	Step 2
Rewrite the problem as a multiplication problem. Rewrite the divisor as its reciprocal.	Simplify if possible. Multiply. If your answer is an improper fraction, change it to a mixed number.
The reciprocal of $\frac{3}{10}$ is $\frac{10}{3}$. $\frac{4}{5} \times \frac{10}{3}$	$\frac{4}{\cancel{5}^1} \times \frac{\overset{2}{10}}{3} = \frac{8}{3}$ $\frac{8}{3} = 2\frac{2}{3}$

Write the reciprocal of each fraction or number.

1. $\frac{2}{5}$ _____

2. $\frac{1}{7}$ _____

3. 9 _____

4. 15 _____

Find each quotient. Simplify if possible.

5. $6 \div \frac{1}{4} =$ _____

6. $\frac{2}{3} \div \frac{1}{2} =$ _____

7. $\frac{4}{5} \div 10 =$ _____

8. $\frac{1}{3} \div \frac{8}{9} =$ _____

9. $12 \div \frac{3}{8} =$ _____

10. $\frac{7}{10} \div \frac{3}{4} =$ _____

11. $\frac{11}{12} \div \frac{1}{3} =$ _____

12. $\frac{5}{8} \div 6 =$ _____

13. Marcus is making tea for his friends. He has 6 tbsp of honey. If he puts $\frac{1}{2}$ tbsp of honey in each cup of tea, how many cups can he make?